Data Analysis with Pandas and Matplotlib

Aim

Create a scatter plot of the trading volume versus stock prices for Alphabet Inc. stock between two specific dates.

Algorithm

1. Import required libraries (pandas and matplotlib)
2. Load the stock data into a DataFrame
3. Convert the 'Date' column to datetime and set it as the index
4. Filter the data for the specified date range
5. Create a scatter plot using matplotlib
6. Set the title, x-label, and y-label
7. Display the plot

Code

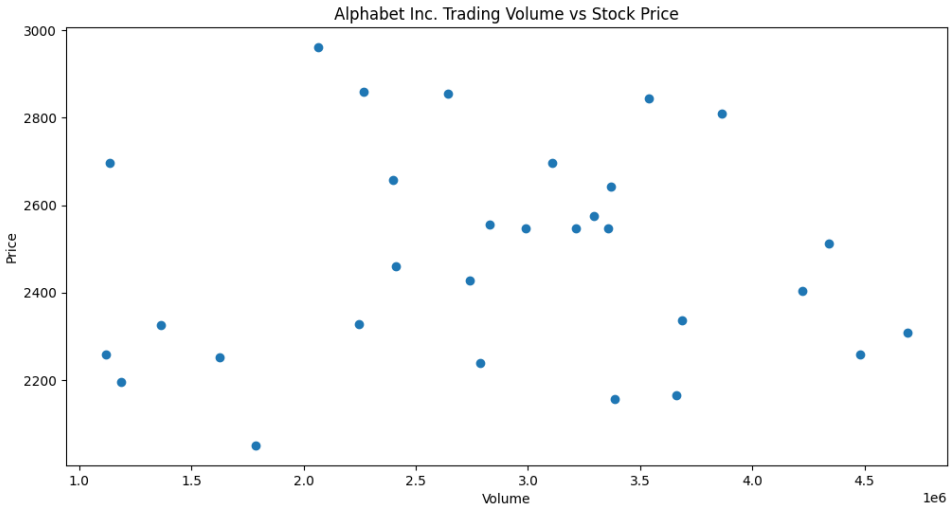
```
import pandas as pd
import matplotlib.pyplot as plt

data = {
    'Date': pd.date_range(start='2022-01-01', end='2022-12-31', freq='D'),
    'Close': np.random.uniform(2000, 3000, 365),
    'Volume': np.random.randint(1000000, 5000000, 365)
}
df = pd.DataFrame(data)
df.set_index('Date', inplace=True)

start_date = '2022-06-01'
end_date = '2022-06-30'
filtered_data = df.loc[start_date:end_date]

plt.figure(figsize=(12, 6))
plt.scatter(filtered_data['Volume'], filtered_data['Close'])
plt.title('Alphabet Inc. Trading Volume vs Stock Price')
plt.xlabel('Volume')
plt.ylabel('Price')
plt.show()
```

Output



Result

```
    The scatter plot visualizes the relationship between trading volume and stock
prices for Alphabet Inc. within the specified date range.
```